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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,815	11/04/2003	Hiroyuki Ishida	Q77547	4439
23373	7590	06/23/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			REHM, ADAM C.	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary	Application No.	Applicant(s)	
	10/699,815	ISHIDA ET AL.	
	Examiner	Art Unit	
	Adam C. Rehm	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/4/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph.
3. Claim 4 recites the limitation "said image." There is insufficient antecedent basis for this limitation in the claim.
4. Claims 6 and 7 are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant defines the arrangement of semiconductor chips as "a matrix" in Claim 5 and then redefines the arrangement as "a single line" in depending Claims 6 and 7. Notably, a single line arrangement conflicts with the common and accepted meaning of a matrix arrangement. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-2, 5, 6, 8, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by MURATA (US 4,935,665).

6. Regarding Claim 1, MURATA provides a semiconductor light-emitting element (Fig. 1, 2) and an optical system (Fig. 1 generally) comprising at least one of a reflector (14 and 15, Column 3, Lines 46-48) and a lens (31), a focal point of said optical system being on or near a light-emitting surface (3) of said light-emitting element (Fig. 1, Column 4, Lines 32-43), said light-emitting surface of said light-emitting element having a horizontally elongated shape in a direction orthogonal to an optical axis of said light-emitting element when viewed in the direction of the optical axis of said light-emitting element (Fig. 12, 3), and said optical system forming a light distribution pattern by enlarging a light pattern of said light-emitting surface in a horizontal direction (Fig. 14, 31).

7. Regarding Claim 2, MURATA provides a light-emitting surface (3) having a substantially rectangular shape when viewed in said direction of said optical axis (Fig. 12).

8. Regarding Claims 5, 8 and 13, MURATA provides a plurality of semiconductor chips (2) arranged in a rectangular matrix (Fig. 16) having a hemispherical transparent member covering said semiconductor chips (Figs. 16 and 17).

9. Regarding Claim 6, as previously mentioned, there is a discrepancy regarding the arrangement of the semiconductor chips. As best understood by Examiner, applicant intends to claim a single line within a matrix in Claim 6. However, MURATA provides a plurality of semiconductor chips (2) arranged in at least a single line (Fig. 16)

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having a semi-cylindrical transparent member covering said semiconductor chips (Figs. 16 and 17).

10. Regarding Claims 12, MURATA provides a semiconductor light-emitting element (Fig. 1, 2) and an optical system (Fig. 1 generally) comprising at least one of a reflector (14 and 15, Column 3, Lines 46-48) and a lens (31), a focal point of said optical system being on or near a light-emitting surface (3) of said light-emitting element (Fig. 1, Column 4, Lines 32-43), said light-emitting surface of said light-emitting element having a rotationally asymmetric shape in a direction orthogonal to an optical axis of said light-emitting element when viewed in the direction of the optical axis of said light-emitting element (Figs. 13 and 14, 31), and said optical system forming a light distribution pattern by enlarging an image of said light-emitting element (Fig. 14, 31).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3, 7, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over MURATA (US 4,935,665) as applied to Claims 1 and 12 above, and further in view of LEE (US 6,637,922).

12. Regarding Claim 3, MURATA discloses the claimed invention as cited above, but does not disclose a fluorescent body filled around a semiconductor chip. However, LEE teaches the use of a fluorescent material disposed about a light source that is

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rotationally asymmetric (Fig. 1B, 2) for the purpose of enhancing the overall light intensity of the device (Column 2, Lines 33-45). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the fluorescent material of LEE into MURATA to provide a light source with enhanced light intensity.

13. Regarding Claim 7, as previously mentioned, there is a discrepancy regarding the arrangement of the semiconductor chips. As best understood by Examiner, applicant intends to claim a single line within a matrix in Claim 7. While MURATA discloses a plurality of semiconductor chips (2) arranged in a single line (Fig. 16) having a semi-cylindrical transparent member covering said semiconductor chips (Figs. 16 and 17), MURATA does not disclose a fluorescent member. However, LEE teaches the use of a fluorescent material disposed about a light source for the purpose of enhancing the overall light intensity of the device (Column 2, Lines 33-45). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the fluorescent material of LEE into MURATA to provide a light source with enhanced light intensity.

14. Regarding Claim 9, MURATA discloses a plurality of semiconductor chips (2) arranged in a rectangular matrix having a hemispherical cover for said chips, but does not disclose a fluorescent body filled around a semiconductor chip. However, LEE teaches the use of a fluorescent material disposed about a light source (Fig. 1B, 2) for the purpose of enhancing the overall light intensity of the device (Column 2, Lines 33-45). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the fluorescent material of LEE into MURATA to provide a light source with enhanced light intensity.

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15. Regarding Claim 14, MURATA discloses the claimed invention as cited above, but does not disclose a fluorescent member covering a light-emitting portion. However, LEE teaches the use of a fluorescent material disposed about a light source (Fig. 1B, 2) for the purpose of enhancing the overall light intensity of the device (Column 2, Lines 33-45). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the fluorescent material of LEE into MURATA to provide a light source with enhanced light intensity.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over MURATA (US 4,935,665). MURATA discloses the claimed invention as cited above, except for the ones of said semiconductor chips of different sizes. However, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate chips of different sizes for the purpose of projecting various distribution patterns, since such a modification would have involved a mere change in the size of the component. A change in size is generally recognizes as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). In this case, the advantage of changing the size would permit the emission of various patterns.

17. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over MURATA (US 4,935,665) as applied to Claims 1 and 5 above, and further in view of SEGOSHI (US 4,868,726). With respect to Claim 4 and the aforementioned

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antecedent rejection, as best understood by Examiner, applicant intends to refer to said "light pattern" rather than said "image."

18. Regarding both Claims 4 and 11, MURATA discloses the claimed invention as set forth above, except for the semiconductor chips shaped and arranged to produce a projected light pattern having a cut line for a headlamp low beam. However, SEGOSHI teaches a blind 6 that intercepts light from a low beam (Column 1, Lines 33-41) for the purpose of preventing dazzle or glare to oncoming traffic (Column 1, Lines 42-46). It would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the SEGOSHI design in order to produce a light pattern having a cut line in order to control emitted light.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19. CIPPERLY (US 1,576,035) provides a headlamp having a light source situated below a horizontal cut-off.

20. BIRT (US 4,575,787) provides a headlamp having a lower beam portion and a horizontal upper cut-off.

21. SATO (US 5,199,779) provides a projection-type vehicular headlamp having an edge that intercepts unwanted light being reflected from an inclined front of a lens.

22. NEUMANN ET AL. (US 5,975,730) provides a headlight apparatus having several headlight subunits with multiple reflectors for producing a variable light beam.

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23. HARPERS ET AL. (US 6,406,172) provides a headlamp comprising a plurality of LEDs arranged in a matrix.


24. NATSUME (US 6,619,825) provides a lamp unit with a plurality of light sources arranged in a matrix having a central light source.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACR
June 15, 2005



ALAN CARIASO
PRIMARY EXAMINER